REMARKS

Claims 1, 3-21, 33, 55-62, 73-83, and 85-90 are pending in the application. Claims 2, 22-32, 34-54, 63-72, and 84 were previously canceled. Claims 1, 3-21, and 33 have been allowed. Claims 83, 85-90 have been amended.

As discussed below, the present amendment now places all of the pending claims in the application in condition for allowance.

OBJECTED CLAIMS

Claim 88 was objected to because of an apparent typographical error. Applicants thank the Examiner for pointing out this mistake. Claim 88 has been amended to correct the error and is now in condition for allowance.

Claims 83, 85, 86, 87, 89, and 90 were objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants have amended the claims to include the limitation, "having one conservative amino acid substitution." Consequently, the amended claims are now within the scope of claims 55, 86, or 88. Applicants request withdrawal of this objection and allowance of these claims.

REJECTED CLAIMS

In the Office Action, claims 55-62, 73-82, 86, and 87 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse this rejection.

(A) The Examiner states that the specification does not support the conservative variant binding to acute myeloid leukemia cells, as recited in claim 55,

> because the limitation would also include peptides which bind selectively to acute myeloid leukemia cells to the exclusion of chronic myeloid leukemia cells, or the exclusion of normal myeloid cells, and the specification does not provide a single peptide which would bind in a specific manner to acute myeloid cells to the exclusion of either chronic myeloid leukemia cells or normal myeloid cells.

Applicants thank Examiner Canella for taking the time to clarify this rejection in a telephone call of June 30, 2006. In that telephone call the Examiner acknowledged that this rejection was based on a misreading of the claim to require that the recited polypeptide "*specifically* binds" to acute myeloid leukemia cells, rather than simply "binds" to acute myeloid leukemia cells. The Examiner recommended that Applicants point out this misreading of the claim in this response in order to rebut the pending rejection. Thus, Applicants respectfully point out that claim 55 only requires that the peptides bind to acute myeloid leukemia (AML) cells, not that the peptides bind to AML cells to the exclusion of other cells. The data shown in Example 11 (pp. 35-38) clearly demonstrate that the peptides corresponding to SEQ ID NOS: 1-6, 8-11, 15, 16, 19, 21, and 22 are capable of binding to AML cells. The other claimed SEQ ID NOS: 7, 12-14, 17, 18, 20, 23 only vary from one of the previous sequences by the addition of a Cys at the amino and carboxyl termini. Even though the peptides might have varying selectivity with regard to other types of cells, their binding to AML cells is unambiguous. Applicants further note that several uses are disclosed in the specification for peptides binding to AML cells, even if those peptides may or may not bind to other cell types as well (e.g., inducing differentiation and diagnostics).

Applicants further note that one of ordinary skill in the art would recognize that the Applicants were in possession of the polypeptide variants recited in the rejected claims because the Applicants have clearly explained the means for identfying the conservative amino acid substitutions that provide the members of the claimed genus in the specification. The Examiner is referred to Applicants previous response, mailed on February 13, 2006 for a detailed discussion of this issue. Accordingly, Applicants respectfully submit that the written description requirement is satisfied for claim 55 and claims depending therefrom.

(B) With regard to claim 86, the Examiner states that the disclosure lacks support for the claim that the peptides indicated by SEQ ID NOS:1 and 3 induce differentiation of AML cells. Applicants respectfully disagree. While the Examiner is correct in indicating that the free peptides induce differentiation in myeloid leukemia cells (see Figure 1), other data indicate that free peptides, as well as phage-displayed peptides, result in differentiation of AML cells. First, Example 10 shows that peptides G5-12-8B and A2-11-24 (corresponding to SEQ ID NO: 9 and

7, respectively) can cause differentiation of freshly obtained human bone marrow AML cells (paragraph [0143]). Second, Example 13 tests the effects of various phage-displayed peptides on the differentiation of cells from AML patients. Several of the peptides, including G5-12-8B, A2-11-24, and G2-12-8A, all show an effect on differentiation. Third, Example 15 shows an effect on AML cell differentiation of various peptides, including those corresponding to SEQ ID NOS:1-3, 7-9, 13, 15, 16, and 21 (Table, p. 45) and SEQ ID NOS:1-4, 7, 8, 15, 16, and 21 (Table, p. 46).

This data, present in the original disclosure, indicates that free peptides as well as phage-displayed peptides are capable of inducing differentiation of AML cells, as well as myeloid leukemia cells. Accordingly, one of skill in the art could reasonably conclude that Applicants were in possession of the claimed invention at the time of filing. For this reason, Applicants respectfully request withdrawal of this rejection.

For the foregoing reasons Applicants respectfully submit that all of the claims pending in the application are now in condition for allowance. Consequently, Applicants respectfully request that Examiner withdraw all of the rejections and allow the application to issue. The Examiner is invited to contact the undersigned by telephone if it is thought that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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